

## Cumulative contents Volume 32

### Volume 32, Nos. 1-2, May 1993

#### Editorial

V. Roberto	
Intelligent systems for signal and image understanding .....	1

#### Papers

##### Part 1. Basic issues

J.L. Crowley and Y. Demazeau	
Principles and techniques for sensor data fusion .....	5
V. Roberto	
Knowledge-based understanding of signals: An introduction .....	29

##### Part 2. Tools and techniques

M.J.L. Orr, Combining occluded surface boundaries .....	57
E. Trucco, Part segmentation of slice data using regularity .....	73
E. Martí, J. Regincós, J. López-Krahe and J.J. Villanueva, Hand line drawing interpretation as three-dimensional objects ..	91
F. Kummert, H. Niemann, R. Prechtel and G. Sagerer, Control and explanation in a signal understanding environment ..	111

##### Part 3. Real-world applications

A. Del Bimbo, L. Landi and S. Santini	
Determination of road directions using feedback neural nets .....	147
P. Chauvet, J. Lopez-Krahe, E. Taflin and H. Maitre	
System for an intelligent office document analysis, recognition and description .....	161
L.-S. Kung and J.-C. Samin,	
A procedure of reading mechanical engineering drawings for CAD applications .....	191
S. Molander and H. Broman	
Knowledge-based segmentation and state-based control in image analysis: Two examples from the biomedical domain ..	201
G.L. Foresti, V. Murino, C.S. Regazzoni and G. Vernazza	
Distributed spatial reasoning for multisensory image interpretation .....	217

#### Short communication

V. Neagoe	
Applying pattern recognition principles for intelligent detection of FSK signals .....	257

### Volume 32, No. 3, June 1993

#### Signal processing

R.G. Baraniuk and D.L. Jones	
Signal-dependent time-frequency analysis using a radially Gaussian kernel .....	263
A. Zayezdny and S. Tiunov	
Extrapolation of time series by their structural properties .....	285
L. Qiu and A.C. Tsoi	
The relationship between a time-varying model of non-stationary signals and its Wigner distribution .....	305
P. Händel	
High-order Yule-Walker estimation of the parameters of exponentially damped cisoids in noise .....	315
M.D. Ortigueira	
ARMA realization from the reflection coefficient sequence .....	329

**Image processing**

A.E. Çetin

A multiresolution nonrectangular wavelet representation for two-dimensional signals ..... 343

T. Tommasi, A. Diaspro and B. Bianco

3-D reconstruction in optical microscopy by a frequency-domain approach ..... 357

T.H. Reiss

Object recognition using algebraic and differential invariants ..... 367

L. Bedini, L. Benvenuti, E. Salerno and A. Tonazzini

A mixed-annealing algorithm for edge preserving image reconstruction using a limited number of projections ..... 397

**Short communication**

X. Yu, N.K. Loh and W.C. Miller

An improved digit-reversal permutation algorithm ..... 409

**Author index** ..... 417**Cumulative contents** ..... 419

